

Claims

1. A metal hydride storage canister, comprising:

a storage canister body, having an inner diameter, a bottom, and an outlet opposing the bottom;

- 5 at least one wafer baffle, placed in the canister body, the wafer baffle being made of a thermally conductive material, the wafer baffle having a bottom face which is formed with a first aperture and having a peripheral wall with an outer diameter being substantially equal to the inner diameter of the canister body, the peripheral wall substantially extending from a periphery of the bottom face orthogonally; and
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a first tubing, passing through the first aperture of the bottom face of the wafer baffle, the first tubing having a porous surface and being communicated with the outlet of the canister body.

- 15 2. The metal hydride storage canister according to Claim 1, comprising: a plurality of wafer baffles, stacked on the canister body.

3. The metal hydride storage canister according to Claim 2, further comprising:

20 a lid, formed with a first opening at a location corresponding to where the first aperture of the bottom face of each of the wafer baffle is located, and being stacked over the wafer baffles.

4. The metal hydride storage canister according to Claim 2, wherein the peripheral wall of each of the wafer baffles has an upper edge that is formed with at least one notch for enhancing support strength of the
- 25 wafer baffles.

5. The metal hydride storage canister according to Claim 1, wherein the first tubing having the porous surface is a porous metal sintered tubing.
- 5 6. The metal hydride storage canister according to Claim 2, further comprising at least one second tubing, and wherein the bottom face of each of the wafer baffles is further formed with at least one second aperture to allow the second tubing to correspondingly pass therethrough.
- 10 7. The metal hydride storage canister according to Claim 6, wherein the second tubing is a metal sintered tubing having a porous surface.
- 15 8. The metal hydride storage canister according to Claim 3, further comprising at least one second tubing, and wherein the bottom face of each of the wafer baffles is further formed with at least one second aperture and the lid is further formed with at least one second opening to allow the second tubing to correspondingly pass through the at least one second aperture of each of the wafer baffles and the at least one second opening of the lid.
- 20 9. The metal hydride storage canister according to Claim 8, wherein the second tubing is a metal sintered tubing having a porous surface.
- 20 10. A method for manufacturing a metal hydride storage canister comprising the steps of:
- a. performing a canister body having an open end;
- b. stacking a plurality of wafer baffles, each of which has at least one aperture formed at a bottom thereof and is contained with metal hydride;
- 25 c. passing at least one porous tubing, in term, through the at least one aperture of each of the stacked wafer baffles;

d. placing the stacked wafer baffles into the preformed canister body through the open end thereof; and

5 e. making the inner diameter of the preformed canister body approach the outer diameter of the wafer baffles, and shrinking the open end by heat rolling the preformed canister body and the open end.

11. The method according to Claim 10, further comprising the step of placing a lid over the stacked wafer baffles, before step e., of which the lid is formed with at least one opening at a location
10 corresponding to where the at least one aperture of the bottom face of each of the wafer baffles is formed.